ject. There is little question that most of us, reared in school laboratories, do not get the nice, exact results in the use of microscopes which are obtained by the thorogoing students of microscopy.

Certain simple precautions leading to good illumination introduce the paper:—Cut out all unnecessary light from the room, so that no light gets to the eye except thru the microscope; save the best eye for critical moments by using the other eye for preliminary steps; use color screens complementary to the stains used, green for red, yellow for blue, etc. The subject of illumination itself the author discusses under these heads: The most suitable light; collecting lenses; principles of correct illumination both of the field and of the object itself; condensers; distance of lamp from substage mirror; critical and non-critical illumination; working aperture; general arrangement of light and apparatus in high, medium, and low-power work.

For the detailed discussion of these topics the readers must be referred to the original paper.

CLEANING DIATOMS

Blake (Am. Jour. Sci. Jan. 1913) calls attention to the interest in cleaning, mounting, and study of diatoms. After recounting the difficulties attendant on the usual methods he describes a method originated by himself some twenty years ago.

Instead of the older method of treating with acid, diluting with water, and repeated decanting, the author devises an organic seive made by cementing a thin cross-section of some coniferous wood to a small glass vial whose bottom has been cut off for the purpose. The wood is cut about one-quarter millimeter in thickness, from a suitable piece of wood kept until the operation in boiling water. This is done by means of a sharp, thin-edged chisel.

The operation of cleaning the diatoms consists of placing the digested diatom material, moderately diluted, in the vial, and by means of a suitable rubber compression bulb, alternately pressed and released, of forcing the acids and salts thru the seive, and the clay and fine sand thru or into its pores. These diatoms which are longer than the diameter of the pores will remain behind with larger grains of sand which must be removed in some other way.

It is necessary to see that the strainer does not become choked. This may be prevented by shaking. The strainer should, of course, be kept in water between uses. When it finally becomes clogged with sand, a new one must be put on.

By using wood with different sized conducting vessels, a sorting of the diatoms may be affected. By using pine, spruce, white wood of the red cedar, a graded series of strainers can be had, the last being much finer than the first.

STAINING PROTOZOA

Darling (Science: Jan. 10, 1913) calls attention to the dearth of knowledge of the acidophilic substances in the nuclei of protozoa, owing to the predominant use of basophilic staining substances, and to the "lack of a satisfactory technic for demonstrating acidophilic substance in wet fixed films."

The author suggests careful differentiation of such polychrome stains as Romanowsky or Hastings-Giemsa, by ammoniated ethyl alcohol. Under such conditions, studying *Entamœbæ,* he found a definite arrangement of an acidophilic substance (oxychromatin) within the nucleus, showing a structure quite different from that shown with the usual basichromatin stains. He believes that careful and critical study will reveal that this oxychromatin may have important functional relations to the changes that are so well known in the true chromatin in nuclear activity.

DOUBLE-STAIN METHOD FOR THE POLAR BODIES OF DIPHTHERIA BACILLI

Dr. Marie Raskin (Apoth. Ztg. XXVII, p. 10; Abstr. United St. Naval Med. Bull. Vol. 6, No. 4, p. 611) proposes a technic for these bodies, whose distinctive value lies in the fact that only two operations are necessary, i. e., the application of a stain with both colors present, then water washing.

Formula for stain:—

Glacial Acetic Acid.....	5 cc.
Dist. Water	95 "
Alc. (95%)	100 "
Old Sat. sol Methylene blue.....	4 "
Ziehl's phenol fuchsine Sol.....	4 "